IB Global Warming Lab April 17th Room 109 (posted at: <http://physics-pages.wikispaces.com/> )

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Play with the following sims and write a description of the relationships you can derive:

<http://phet.colorado.edu/en/simulation/blackbody-spectrum>

Check max wavelength for solar temperature, 5800 K and Earth 288 K.

<http://phet.colorado.edu/en/simulation/microwaves>

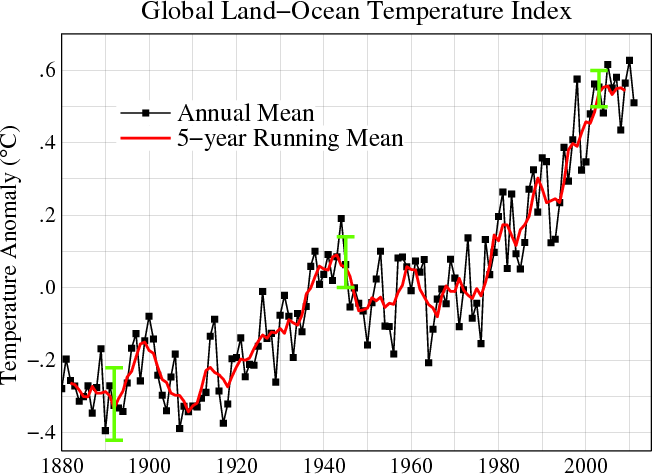
[**http://phet.colorado.edu/en/simulation/greenhouse**](http://phet.colorado.edu/en/simulation/greenhouse)

**Why is there more infrared radiation up than down?**

**Click on photon absorption. Make an atmosphere of Nitrogen and Oxygen. Observe. Now make one of Methane, carbon dioxide and water. Observe**

**Continue on back**

**Look at the data displayed at:** [**http://data.giss.nasa.gov/gistemp/graphs\_v3/**](http://data.giss.nasa.gov/gistemp/graphs_v3/)



1. **What is “temperature anomality?”**
2. **What is the slope of a linear best-fit gradient with uncertainties from max/min lines?**
3. **Climate change deniers used the data from 1998 and 2008 to show climate change is a crock. How would you respond?**
4. **What actions could alter this trend? Should these actions be taken?**